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TITLE: Device and method for crystallization and drying of granulated macromolecular substances

INVENTOR(S): Blazek, Jiri; Fallada, Miroslav; Suesser, Otakar

PATENT ASSIGNEE(S): Czech.

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PATENT INFORMATION:

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AB A discontinuous app. for crystn. and drying of granulated polymers, e.g. polyesters, consists of a vertical agitated crystallizer, where crystn. proceeds in adiabatically expanded steam at temps. 10-100 K below the glass transition temps. of the polymers, connected by a gate with a vertical countercurrent air drier, where air of temps. 10-200 K below the softening temps. of the polymers is used. The app. prevents aggregation of the granules and saves energy and transport between crystn. and drying. Thus, poly(ethylene terephthalate) [25038-59-9] was crystd. in batches (50 kg/30 min) with stirring, contacted with expanded 1 MPa steam (30 kg/h), and dried with air (400 kg/h) at 150-179.degree. for 2 h (drier capacity 200 kg) to give granules having d. 1.392 g/cm<sup>3</sup> contg. 0.006% H<sub>2</sub>O.